SQL

Ray

SCHEDULE

- RECAP / HW
- MORE PRACTICES
- NORMALIZATION
- HW

RECAP

- Design a schema (more than one table) that met the following requirement and estimate the memory size of which you design
  - 4000 students
  - Must be able to query:
    - Public accessible info:
      - Student id, start with 0001
      - First name
      - Last name
      - Sex
      - Enrollment class id
    - Locked info:
      - Home address
      - Emergency contact number
      - Grade

MORE PRACTICES

1. You are writing an SQL statement to retrieve rows from a table. Which Data Manipulation Language (DML) command should you use?	
A. Read	B. Select
C. Get	D. Output

MORE PRACTICES

2. Data in a database is stored in:	
A. Views	B. Data Tables
C. Data Types	D. Views

MORE PRACTICES

3. Which key uniquely identifies a row in a table?	
A. Primary Key	B. Foreign Key
C. Local	D. Super Key

MORE PRACTICES

4. You need to store product names that vary from three to 30 characters.
You also need to minimize the amount of storage space that is used.
Which data type should you use?

A. VARCHAR(3, 30)	B. CHAR(30)
C. CHAR(3,30)	D. VARCHAR(30)

MORE PRACTICES

5. You have two tables. Each table has three rows. How many rows will be included in the Cartesian product of these two tables?	
A. 3	B. 0
C. 6	D. 9

MORE PRACTICES

6. You execute the following statement:
SELECT DepartmentName FROM Department
WHERE DepartmentID =
  (SELECT DepartmentID FROM Employee
  WHERE EmployeeID = 1234);
This statement is an example of a/an:

A. Outer Join	B. Subquery
C. Union	D. Cartesian Product

MORE PRACTICES

7. You have the following table definition:
CREATE TABLE Product (
ID INTEGER PRIMARY KEY,
Name VARCHAR(20),
Quantity INTEGER
);
You execute the following statement:
SELECT Name FROM Product WHERE Quantity IS NOT NULL
How many rows are returned?

ID	Name	Quantity
1234	Apples	33
2561	Oranges	0
3781	Pears	29
4589	Plums	

A. 0	B. 2
C. 3	D. 4

MORE PRACTICES

8. Which keyword would you use in a select statement to return rows that meet a specific condition?	
A. ORDER BY	B. WHERE
C. UNION	D. FROM

MORE PRACTICES

9. The Product table contains the following data.

You execute the following statement:
SELECT COUNT(*)
FROM Product WHERE Quantity > 18;
What is the value returned by this statement?

ID	Name	Quantity
1234	Spoon	33
2615	Fork	17
3781	Plate	20
4589	Cup	51

A. 1	B. 2
C. 3	D. 4

MORE PRACTICES

10. You have a table named Employee that includes the following columns:
EmployeeID
EmployeeName
Which statement should you use to return the number of rows in the table?

A. Select * From Employee	B. Select COUNT(rows) From Employee
C. Select COUNT(*) From Employee	D. Select SUM(*) From Employee

MORE PRACTICES

10. You have a table named Employee that includes the following columns:
EmployeeID
EmployeeName
Which statement should you use to return the number of rows in the table?

A. Select * From Employee	B. Select COUNT(rows) From Employee
C. Select COUNT(*) From Employee	D. Select SUM(*) From Employee

MORE PRACTICES

11. You have a Customer table and an Order table. You join the Customer table with the Order table by using the CustomerID column. The results include:
All customers and their orders
Customers who have no orders
Which type of join do these results represent?

A. Partial Join	B. Inner Join
C. Outer Join	D. Complete Join

MORE PRACTICES

12. A database contains two tables named Customer and Order.
You execute the following statement:
DELETE FROM Order
WHERE CustomerID = 209
What is the result?

A. CustomerID 209 is deleted from the table	B. All orders for CustomerID 209 are deleted from the Order table, and CustomerID 209 is deleted from the Customer Table
C. The first Order for customerid 209 is deleted from the Order table	D. All orders for customerID 209 are deleted from the Order table

MORE PRACTICES

13. The component that holds information for a single entry in a table is called a:	
A. Cell	B. Row
C. Column	D. Data type

MORE PRACTICES

14. Which constraint ensures a unique value in the ID column for each customer?	
A. sequential key	B. distinct
C. Foreign key	D. primary key

MORE PRACTICES

15. You are writing a select statement to find every product whose name contains a specific character.
Which keyword should you use in the where clause?

A. BETWEEN	B. LIKE
C. INCLUDE	D. FIND

CODING PRACTICE

- HTTPS://WWW.HACKERRANK.COM/CHALLENGES/FULL-SCORE/PROBLEM

NORMALIZATION

- RESOURCE: HTTPS://WWW.MYSQL.TW/2013/03/NORMALIZATION.HTML

- READING: HTTPS://EN.WIKIPEDIA.ORG/WIKI/DATABASE_NORMALIZATION

- NORMALIZATION ENTAILS ORGANIZING THE COLUMNS (ATTRIBUTES) AND TABLES (RELATIONS) OF A DATABASE TO ENSURE THAT THEIR DEPENDENCIES ARE PROPERLY ENFORCED BY DATABASE INTEGRITY CONSTRAINTS. IT IS ACCOMPLISHED BY APPLYING SOME FORMAL RULES EITHER BY A PROCESS OF *SYNTHESIS* (CREATING A NEW DATABASE DESIGN) OR *DECOMPOSITION* (IMPROVING AN EXISTING DATABASE DESIGN).

HW

- Complete 10 more practices on hackerrank
- Google what is sql injection ?